

## ABSTRACT

The network switch described herein provides a cell/packet switching architecture that switches between line interface cards across a meshed backplane. In one embodiment, the switching can be accomplished at, or near, line speed in a protocol independent manner. The protocol independent switching provides support for various applications including Asynchronous Transfer Mode (ATM) switching, Internet Protocol (IP) switching, Multiprotocol Label Switching (MPLS) switching, Ethernet switching and frame relay switching. The architecture allows the network switch to provision service on a per port basis. In one embodiment, the network switch provides a non-blocking topology with both input and output queuing and per flow queuing at both ingress and egress. Per flow flow-control can be provided between ingress and egress scheduling. Strict priority, round robin, weighted round robin and earliest deadline first scheduling can be provided.